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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/484,292	01/18/2000	Neil Kent McDonald	9D-HR-19273-McDonald	9518

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07/31/2003

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EXAMINER

DUONG, THO V

ART UNIT PAPER NUMBER

3743

8

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/484,292

Applicant(s)

MCDONALD ET AL.

Examiner

Tho v Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2000 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: at line 24, page 4 and at line 1, page 5 in the specification, the reference number "60" has been used to indicate both the baffle and the refrigerator condenser assembly. Furthermore, at lines 1-6, page 5, in the specification, both reference number "60" and "66" has been used to indicate the baffle.

Appropriate correction is required.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the claimed subject matter of claim 3, "the step of bending the plurality of U-shaped tube segments about axis parallel to the wires" is not described in the specification.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: the reference number (14), which has been described to be in figures 3 and 4 on pages 4 and 5, is not shown in figure 3 and 4. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: the reference number of "68" shown in figure 4, is not mentioned in the description. A proposed drawing correction,

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corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application.

The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claimed subject matters of “mounting a rotatable fan blade at the second end” and “a fan blade mounted at second end” is not possible since the fan blade can not be attached to any support means in order to have the fan blade rotatable.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation “the longitudinal opening” and “the opening” in lines 2 and 3. There are insufficient antecedent bases for these limitations in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over C.A. Heuer (US 3,173,479) in view of Kawabata et al. (US 5,211,219). Heuer discloses (figures 2-5) a method and an apparatus of a refrigerator condenser comprising a spiraled tube and fin member (10) forming by bending the flat tube and fin member into a spiral including first and second ends (top and bottom) and a longitudinal asymmetrically rounded passageway (11'); the tube and fin member comprising an inner edge (13), an outer edge (12) and a longitudinal axis; the inner edge (13) and outer edge (12) substantially parallel to the longitudinal axis wherein the outer edge is located farther than the inner edge from the longitudinal axis; the tube and fin member (10) comprises two wraps (12,13); a baffle (26) mounted at the bottom end of the tube and fin member (10) to prevent air from entering the passage through the bottom end; a fan blade (31) is mounted so that the fan blade is located at the top end of the tube and fin member to draw air into the passageway (11) substantially perpendicular to an outer surface of the tube and fin member (10). Heuer further discloses (figure 3) that the spiraled tube and fin member (10) has a plurality of U-shaped segment attached to the fin member being bent about an axis parallel to the

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fin member. Heuer does not disclose that the fin member is wire. Kawabata discloses (figures 3, 10, 11 and 16) a flat tube and fin member (11) that is bendable to form a desired shape to use in a refrigerator system, wherein the fin member is made of wires so that air can pass through the member to increase the heat transfer surface area of the flat tube and fin member. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Kawabata's teaching in Heuer's condenser to let air pass through the member to increase the heat transfer area of the tube and fin member.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

C. H. Wurtz (US 2,779,173) discloses a heat exchanger that has spiraled tube member.

R. Smith et al. (US 3,524,329) discloses a refrigerant condenser with key connector.

Aubuchon (US 5,097,678) discloses a ventilating protective cover for top discharge air conditioner.

Hancock (US 6,435,269) discloses a heat exchanger with intertwined inner and outer coils.

Wright et al. (US 4,340,115) discloses wrapper for a heat exchanger unit.

Eubank (US 3,908,393) discloses an air conditioning unit containing condenser with evaporator sub-cooler.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tho Duong whose telephone number is (703) 305-0768. The examiner can normally be reached on from 9:30-6 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet, can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7764.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0861.

Tho Duong

July 22, 2003.


Henry Bennett
Supervisory Patent Examiner
Group 3700